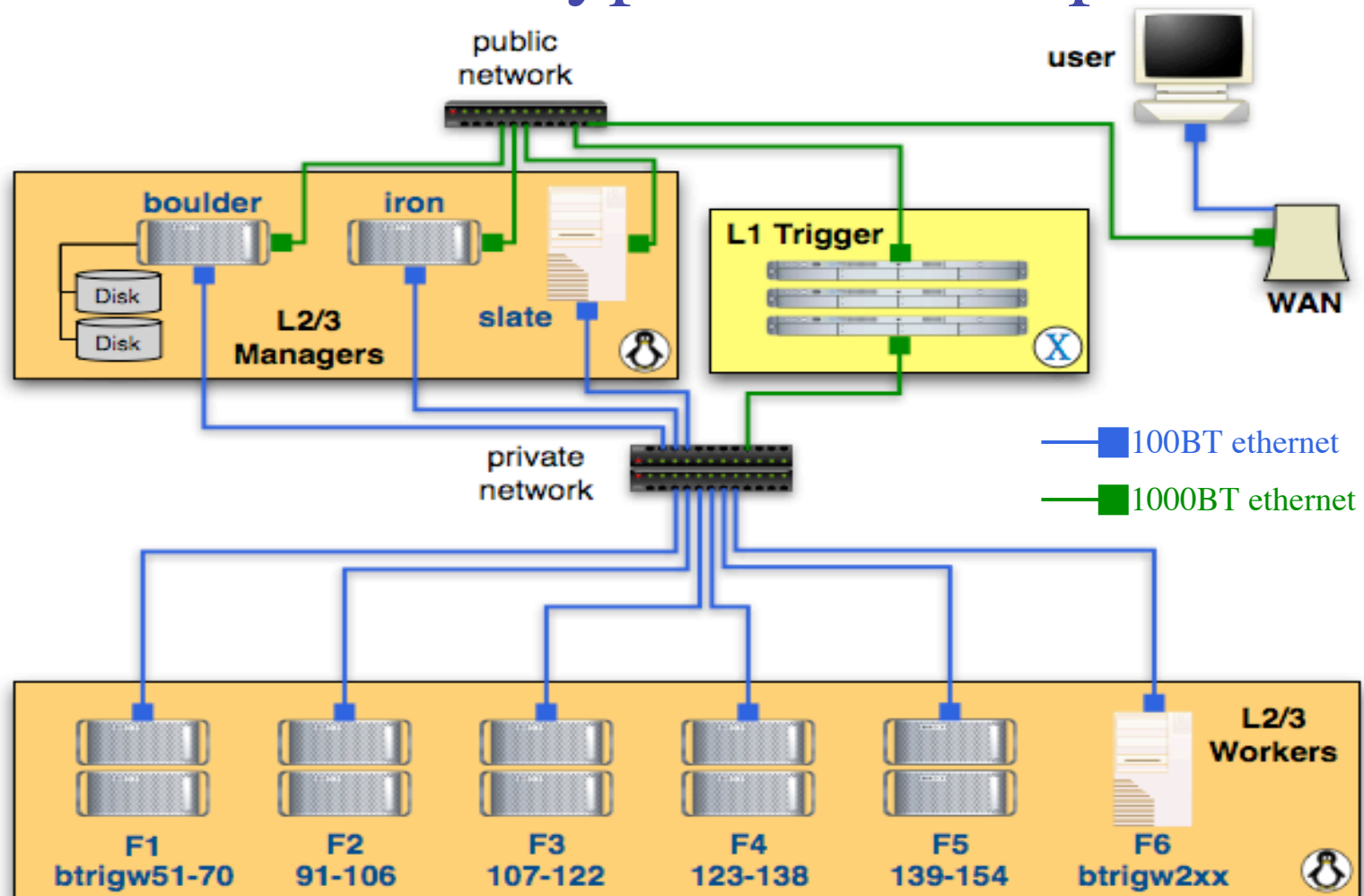# The Prototype L2/3 Trigger PC Farm at FCC

Harry Cheung

Prototype L2/3 Trigger PC Farm

- Using PC's from old PC Farms at Fermilab
  - 3 dual-CPU Manager PCs
    - boulder (1 GHz P3) - meant for data server
    - iron (2.8 GHz P4) - httpd, BB and Ganglia gmetad
    - slate (500 MHz P3) - httpd, BB
  - Managers have a private network through 1 Gbps link
    - bouldert, iront, slatet
  - 15 dual-CPU (500 MHz P3) workers (btrigw2xx)
  - 84 dual-CPU (1GHz P3) PC workers (btrigw1xx)
  - No plans to add more, but may replace with faster ones
  - Ideal for RTES - 11 workers already have problems!
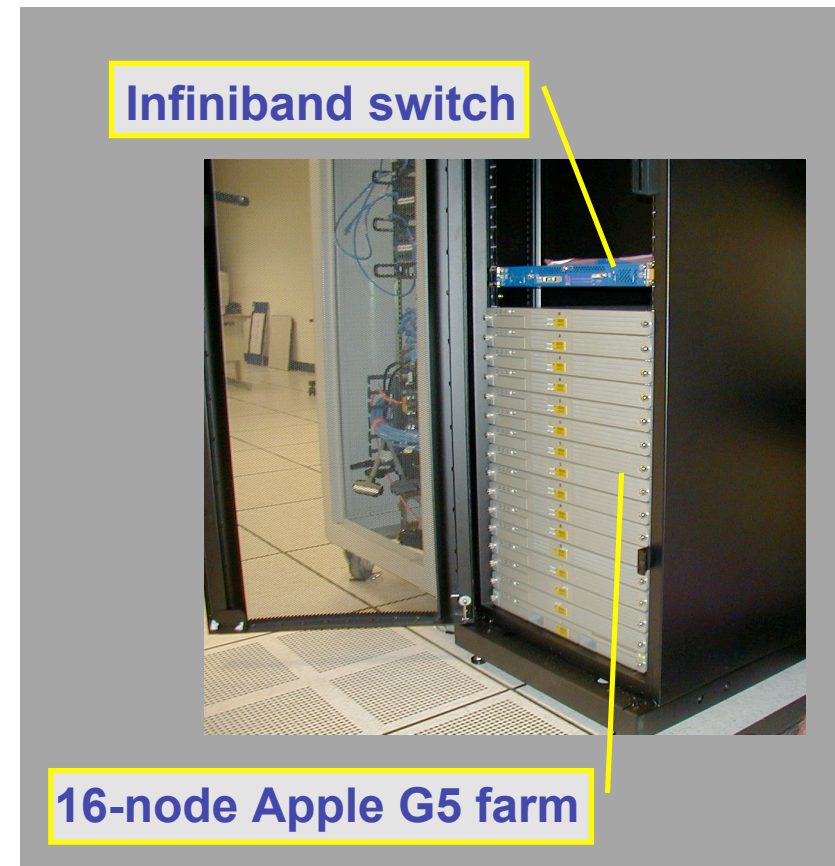
L2/3 Prototype Farm Setup

BTeV Prototype Farms at FCC

L2/3 Trigger Workers

L1 Trigger Farm

L2/3 Trigger Racks F1-F5

Infiniband switch

16-node Apple G5 farm

Prototype L2/3 Trigger PC Farm

- Other hardware:
  - Lantronix 32-port serial console server (SCS3200), allow serial connections to managers and 15 workers (**btrigw2xx**)
  - APC networked power distribution strips, allow network control of power outlets for managers and all workers except for rack F1.
  - 140 GB of disk on **boulder** for data storage and data distribution, meant to simulate the L1 buffer (could also use **iron** if we can add disks).
  - One Cisco switch, with a private network VLAN for the L2/3 workers and one for the L1 Trigger, also provides VLAN public network to WAN
  - Possible for L2/3 and L1 Trigger workers to exchange data, (maybe the next demo is a combined L1+L2/3 demo?)

Setup for the Prototype L2/3 Farm

- PCs running Scientific Linux version LTS 3.0.1
    - **boulder**, **slate**, **btrigw2xx**
- PCs running Scientific Linux version LTS3.0.3
    - **iron**, **btrigw1xx**
- Remote access via kerberos to manager PCs as user **rtes**, from a manager, **rtes** can login to any worker
    - Slower access to **btrigw1xx** (than for **btrigw2xx**) - still need to solve
    - Email cheung@fnal.gov to request system level software installed
    - User **rtes** on workers do not have a common home area. But all run **tcsh**, and source **/rtes_disk/rtes/.cshrc** and **/rtes_disk/rtes/.login**
- Monitoring of workers using **iron** and **slate**, using BB and ganglia
    - **iron** runs httpd, bb, gmetad; **slate** runs httpd, bb
    - **boulder** runs ftp service (vsftp) for workers on private network
    - Web page on **iron** and **slate** accessible only from .fnal.gov

BB and Ganglia
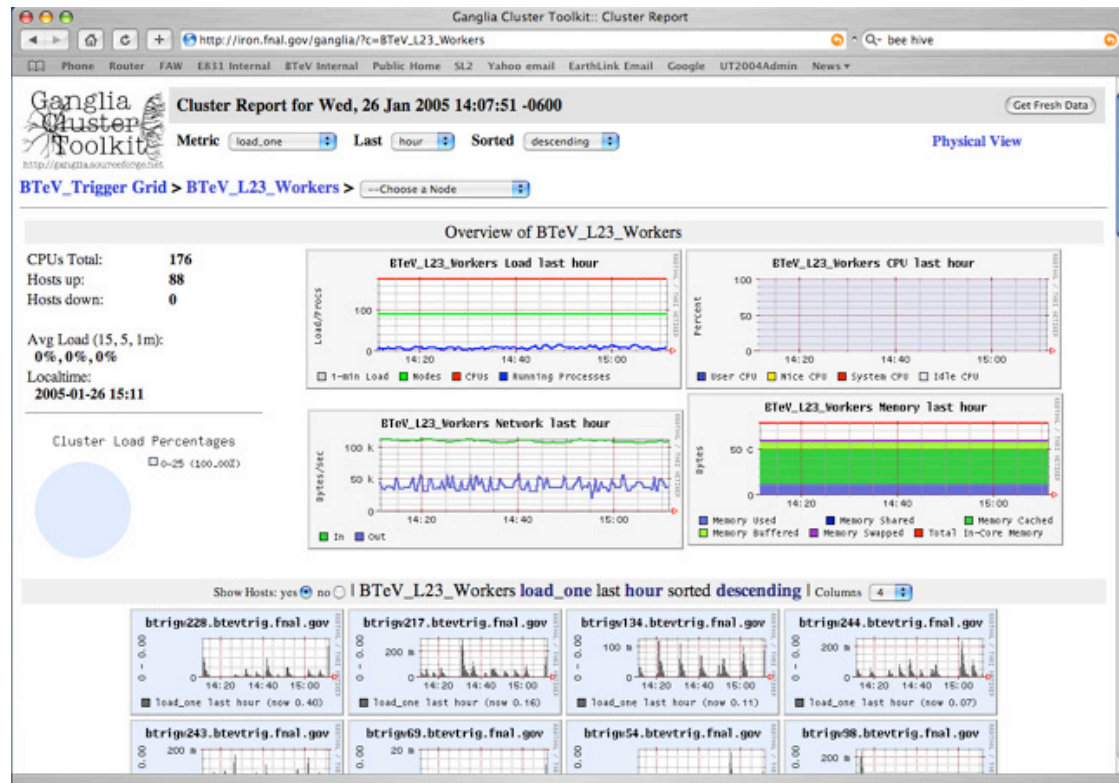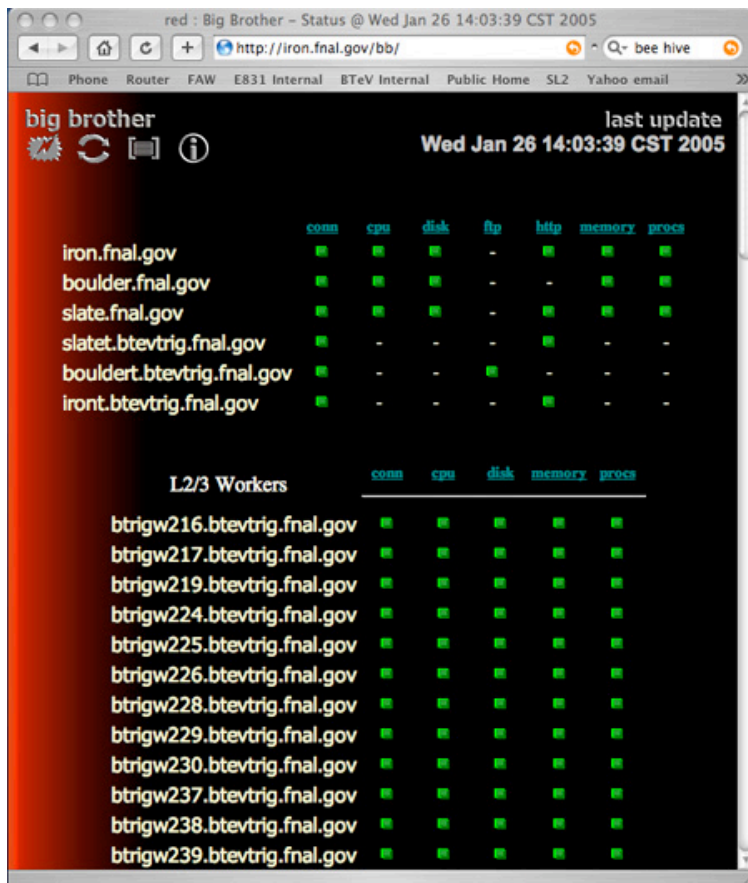
Click windows for demos (if at fnal.gov) or
look at http://iron.fnal.gov/

Contacts

- Harry Cheung (cheung@fnal.gov) is the contact person for the L2/3 Trigger Farm

- Jim Kowalkowski (jbk@fnal.gov) is the contact person for the L1 Trigger Farm

- Currently, people who can login to the L2/3 Trigger Farm as user **rtes** are

  – cheung, jbk, snordstr, longwang, haney, weippert

  – To add additional users email cheung@fnal.gov and jbk@fnal.gov